

リモ前ニ日光ニ遊ビ戰場ケ原ノ一茶店デ土産ニ購メタひめしゃくなげノ株ニ混
ジテ居タ由デコレヲ増殖サレタモノト聞イタ。日光デハひめしゃくなげヲ他ヨ
リ持チ込ムコトモ無カラウカラ多分戰場ケ原ニ自生ガアルモノト思フ。シカシ
今迄ノ私ハコレヲ同地デ採集シタ人アルヲ聞カナイ。 (ツマク)

Notes on Japanese Species of the genus *Fimbristylis* (I)

By

Takasi TUYAMA

津山 尙：日本産てんつき屬報知 (其一)

1) *Fimbristylis campylophylla* TUYAMA sp. nov.

Radix tenuiter fibrosa fusca vel pallido-fusca. Culmi laterales caespitosa erecti vel subpatentes quinquangulares glabri 8-26 cm. longi 1.0-1.2 mm. crassi in sicco leviter striati basi vaginati, vaginis cylindricis 2.5-3.5 cm. longis 2.0-2.5 mm. crassis membranaceis glabris apice subacutis truncatis ore obliquis glabris. Folia suberecta vel erecto-patentia sursum arcuato-deflexa 13-45 cm. longa 2.0-3.5 mm. lata culmos superantia vel leviter breviora plana foliacea vel subcoriacea supra nitiduscula subtus pallidiora margine scabra sursum scaberrima apice gradatim angustata obtusa basi dilatata membranacea albido-fuscescentia circ. 2.5 mm. lata, centralia basi vaginata. Umbella terminalis decomposita 4-7 radiata 7-32-spiculata, radiis glabris 0.5-3.0 cm. longis patentibus compressis, umbellulis 2-4 spiculatis, radiolis 0.5-0.9 cm. longis gracilibus, involuero 5-phylo, phyllis erectis setaceis lanceolatis vel ovato-lanceolatis 0.7-1.8 cm. longis 1.0-1.5 mm. latis apice aristato-attenuatis scabris basi dilatatis pallidioribus viridi-sub-5-striatis, bracteolis 3-5 mm. longis lineari-aristatis. Spicula non glomerata centralis sessilis ovoidea vel ovato-ellipsoidea rarius globulosa 3.5-6.5 mm. longa 2.7-3.0 mm. lata apice obtusa, opaca fusco-nigrescens vel atro-fusca dense squamigera. Squama adpressa membranacea vel membranaceo-scariosa dorso convexa oblongo-elliptica vel ovato-oblonga 1.6-

2.0 mm. longa 0.7–0.8 mm. lata apice obtusa rarius emarginata fusco-lutescens vel fuscescens interiore læviuscula margine sensim albescens integerrima dorso costata, costis pallido-fuscis vel pallidis sæpe viridulo-striatis. Stamen 1, circ. 0.09 mm. latum basi fuscescens margine irregulari-erenatum. Stylus subpersistens glaber stigmatibus excluso circ. 0.9 mm. longus 0.07 mm. latus apice profunde bifidus vel raro trifidus basin versus leviter incrassatus, stigmatibus exsertis erecto-patentibus vel patentibus circ. 1.3 mm. longis longe attenuatis sparsim papillois. Achenium obovoideum biconvexum 0.75–0.85 mm. longum 0.55–0.60 mm. latum 0.25–0.30 mm. crassum flavum vel sulphureo-flavum toto verrucosum minus punctulato-excavatum nitidulum, carpophoro persistenti depresso-obconico basi sensim anguste producto.

Nom. Jap. *Nodi-tentuki* (nov.)

Hab. Japonia :

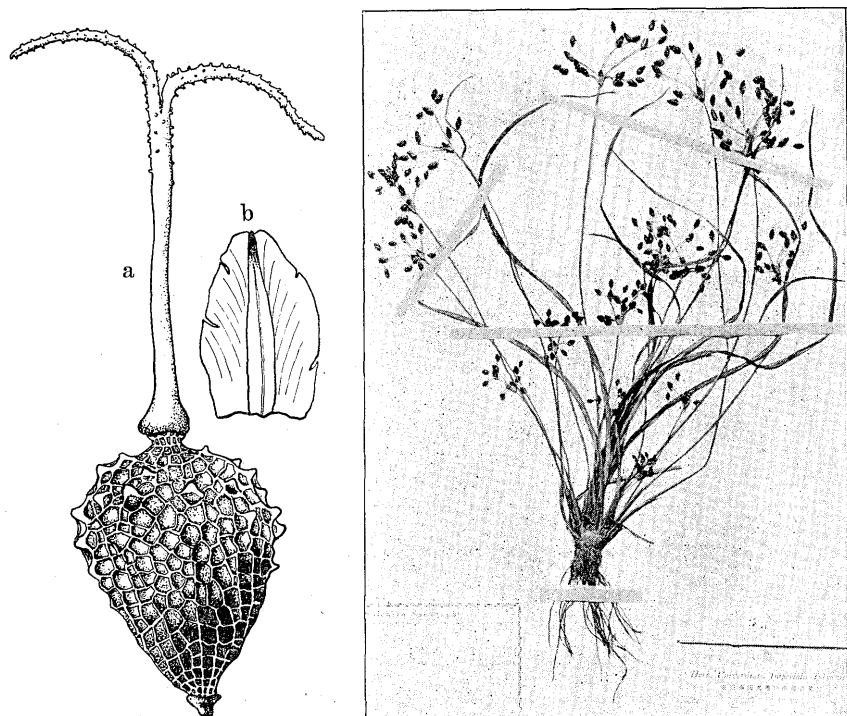


Fig. 1. *Fimbristylis campylophylla* TUYAMA (\times ca 1/4).
a. Achenium cum stylo (\times 40) b. Squama (\times 12).

Prov. *Iyo* : sine loco speciali (leg. K. YAMASITA,—Typus in Herb. Univ. Imp. Tokyo.); Prov. *Liukiu* : Ins. Okinawa (leg. S. SAKAGUTI, no. 1, Oct. 1923).

Distr. Japonia australis.

var. pygmaea TUYAMA var. nov.

Planta humilior, foliis ad 12 cm. altis, culmis multo brevioribus, umbella 3-7-spiculata.

Nom. Jap. *Ko-noditentuki* (nov.)

Hab. Japonia :

Prov. *Tôtômi* : Kawakami oppidi Kawano-mura (leg. G. HASIMOTO, no. 3, Oct. 3. 1931,—Typus in Herb. Univ. Imp. Tokyo.); in monte Ogasayama (leg. D. SIMIDU, no. 431, Oct. 19. 1930).

Distr. Japonia australis.

日本南部=廣ク分布スルモノデ高さ約 30 cm. =達シ、葉ハ 屈曲シ莖ハ葉ト別ニ生ジテ 7-32 個ノ黒褐色圓味ヲ帶ビタ小穂ヲ粗ニツケル。雄蕊ハ 1個、花柱ハ圓柱狀デ先端 2岐シ、果實ハ稍扁壓サレタル倒卵形體デ表面ニ著シク小疣狀突起ヲ生ズル。學名ヲ **Fimbristylis campylophylla** TUYAMA のぢてんつきトスル。ソノ變種 **var. pygmaea** TUYAMA このぢてんつきハ莖ガ非常ニ短カク小穂モ亦少數ノモノデアル。Type ハ愛媛縣山下幸平氏ノ採集ニカカル。

2) **Fimbristylis liukiuensis** TUYAMA sp. nov.

Radix longe fibrosa fasciculata atro-fusca. Culmus centralis erectus vel suberectus glaber 6-16 cm. altus 0.8-1.0 mm. crassus foliis duplo- vel triplo-longior basi 2-3-foliatus in sicco multo striatus. Folia caespitosa erecta linearia 3-12 cm. longa 1.0-1.5 mm. lata coriacea vel subcoriacea glabra margine inferiore glabra vel scabriuscula superiore scabra apice obtusa. Folia interiora basi vaginata, vaginis 1.3-2.5 cm. longa 1.5-2.0 mm. lata papyraceo-membranacea fusca vel pallido-fusca ore obliqua sensim pilosula. Folia exteriora basi dilatata pallidiora fusco-notato-striata 4-6.5 mm. lata margine fusciscentia membranacea attenuata. Umbella supra decomposita 21-95-spiculata 3.5-4.5 cm. diametro subdense dispersa 9-15-radiata, radiis patentissimis 0.4-2.0 cm. longis glabris, umbellulis 2-20-spiculatis, radiolis 0.4-1.0 cm. longis cum 2-5-spiculis, involuero 2-3-phylo, phyllis inæqualibus 1.2-5.0 cm. longis 0.6-1.0 mm. latis foliaceis sursum scabris apice obtusis basi subito dilatatis pallidioribus margine submembranaceis fusciscentibus ubi dorso pilo-

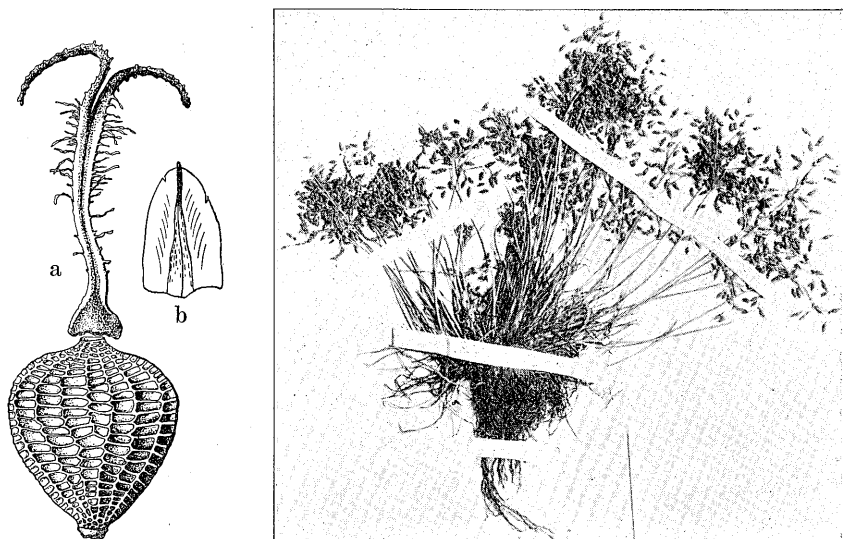


Fig. 2. *Fimbristylis liukiensis* TUYAMA (\times ca. 1/3)
a. Achenium cum stylo (\times 40). b. Squama (\times 12)

sulis, bracteis involucri 1-4, setacea 4-15 mm. longis, bracteolis squamatis ovatis vel ovato-lanceolatis apice aristatis 1.5-2.5 cm. longis basi dorso pilosiusculis. Spicula solitaria centralis sessilis ellipsoidea 3.5-4.0 mm. longa 0.75-0.90 mm. lata apice acuto-obtusa ferrugineo-fusca vel atro-fusca dense squamigera. Squama late ovata vel ovato-oblonga 1.5-1.6 mm. longa 0.75-0.90 mm. lata apice rotundato-obtusa ferrugineo-fusca margine integra pallidior dorso costata, costis fusco-notatis sæpe viridulo-l-striatis apice apiculatis. Stamen 1, filamentis circ. 0.2 mm. latis albis vel pallido-fusciscentibus. Stylus complanatus deciduus apice profunde bifidus stigmate excluso 0.9-1.0 mm. longus circ. 0.18 mm. lata toto dense barbatus atro-fuscus basi plus minus incrassatus. Achenium biconvexum late obovoideum 0.60-0.65 mm. longum 0.55-0.60 mm. latum flavido-album nitidum utrinque 6-7 carinato-striatum transverse-depresso-cancellatum apice umbonato-truncatum basi subito contracto-cylindricum, carpophoro fusco brevi subdisciforme deciduo.

Nom. Jap. *Ryûkyû-tentuki* (nov.)

Hab. Japonia :

Prov. *Liukiu* : Ins. Okinawa (leg. S. SAKAGUTI, no. 48, Aug. 1923,—Typus

in Herb. Univ. Imp. Tokyo.) ; ibidem (leg. S. SAKAGUTI, no. 22, Aug. 1923).

Distr. (Endemica).

坂口總一郎氏採集ノ琉球産てんつき屬ノ1種デ多ク叢生シ高サ約16 cm. = 達スル。莖ハ葉ノ中心ニ生ジ葉ヲ超出シ 21-95 個ノ稍長橢圓體小穗ヲ密ニ生ズル。雄蕊1個、花柱ハ扁平デ先端ハ2岐スル。果實ハ扁壓サレタル倒卵形體デ兩面共6-7列ノ横ニ長イ格子目狀ノ紋ガアル。學名ヲ **Fimbristylis liukuensis** TUYAMA りうきうてんつきトスル。

3) **Fimbristylis diphyloides** MAKINO in MAKINO et NEMOTO, Fl. Jap. ed. 1. p. 1389 (1925), cum diagn. Jap. brev., ed. 2. p. 1473 (1931), cum diagn. Jap. brev.

Radix tenuiter fibrosa pallido-fusca. Culmus graciliusculus lateralis erectus quinquangularis, angulis obtusis, glaber 22-30 cm. altus 0.8-1.0 mm. crassus folia longe superans in sicco multo striatus, basi vaginatus, vaginis 2-3-imbricatis, intimis longissimis 1.1-4.5 cm. longis 1.2-1.3 mm. crassis pallido-virescentibus sub-papyraceis basi pallido-fuscis apice acutis ore rubro-fuscis oblique truncatis. Folia pauca caespitosa erecta linearia 11-20 cm. longa 1.5-2.0 mm. lata nitidula subcoriacea subtus leviter convexa supra plana margine inerassata inferiore glabra superiore scabriuscula apice scaberrima obtusa. Folia exteriora basi dilatata margine hyalino-membranacea, interiora basi vaginata, vaginis 2-3 cm. longis ore attenuatis hyalinis valde obliquis. Umbella terminalis composita sublaxe 5-15-spiculata, 4-9-radiata, radiis erectis vel ascendentibus subcompressis striata 0.9-2.5 cm. longis, umbellulis 1-2- vel raro 3-radiatis, radiolis 0.6-1.0 cm. longis, involuero 5-phyllis superiore patentibus viridulis oblongo-ellipticis vel elliptico-lanceolatis 4-6 mm. longis 0.5-1.3 mm. latis albo-marginatis apice subito aristatis ubi pilosulis, bracteolis setaceis 2-3 mm. longis. Spicula solitaria centralis sessilis ovoidea vel late ellipsoidea 3.5-4.5 mm. longa 2.1-2.4 mm. lata apice acuto-obtusa opaca pallide fusco-nigrescens vel cinero-fusca dense squamigera. Squama ovata vel ovato-oblonga 1.7-1.9 mm. longa 1.1-1.2 mm. lata apice obtusa vel raro emarginata toto glabra ferrugineo-fusca margine alba dorso costata, costis 3- vel rarius 5-viridulo-striatis apice sensim apiculatis ad 0.4 mm. productis. Stamina 1 vel 2 cum antheris 0.6 mm. longis 2.1 mm. longa, filamentis 0.09 mm. latis albidis vel fusciscentibus. Stylus deciduus glaber stigmate excluso circ.

0.7 mm. longus 0.07 mm. latus
basi incrassatus stigmatibus
subexsertis patentibus circ. 1.4
mm. longis papillosis. Ache-

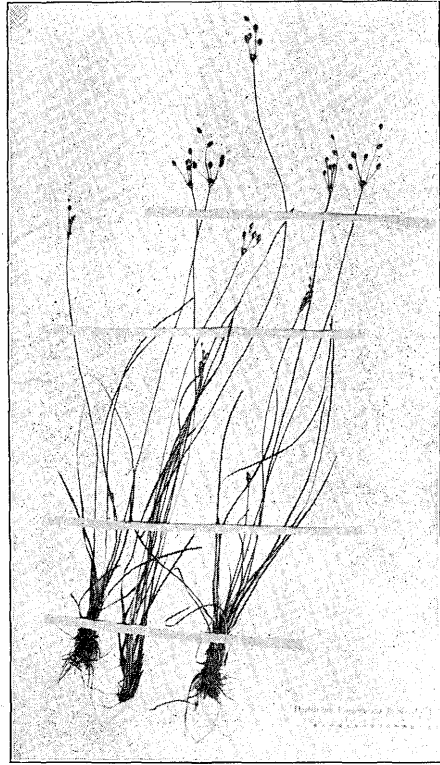
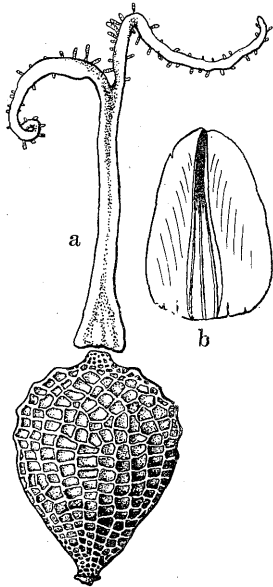


Fig. 3. *Fimbristylis diphylloides* MAKINO ($\times ca\ 1/3$).
a. Achenium cum stylo ($\times 40$). b. Squama ($\times 12$).

nium leviter biconvexum obovoideum basi cuneatum apice subito contractum
circ. 0.8 mm. longum 0.6 mm. latum 0.4 mm. crassum irregulari-reticulatum
vel rarius verruculosum pallido-flavum vel fusco-flavescens, carpophoro com-
press-subdisciformi subpersistenti.

Nom. Jap. *Kuro-tentuki* (MAKINO)

Hab. Japonia :

Prov. *Ettyû* : sine loco speciali (leg. T. MIHATAYA, no. 55) ; Prov. *Etizen* :
Kohara (leg. ? Aug. 5. 1881) ; Prov. *Suruga* : in oppido Hirohata-mura (leg. D.
SIMIDU, no. 207, Sept. 30. 1929) ; Prov. *Tôtômi* : Mineta oppidi Hirata-mura
(leg. G. HASIMOTO, no. 8, Sept. 27. 1931) ; Prov. *Tanba* : in monte Oeoyama
(leg. T. TUYAMA, Sept. 5. 1934) ; Prov. *Aki* : in herbidis prope Hata in oppido

Minamikatamura (leg. T. TUYAMA, Aug. 9. 1932); Prov. *Nagato*: Nakaono in oppido Misumi-mura (leg. D. NIKAI, no. 2829, Aug. 11. 1920); Prov. *Suwô*: Simadi in oppido Simadi-mura (leg. D. NIKAI, no. 2961, Sept. 16. 1920); Prov. *Awa* (*Sikoku*): in oppido Kamomyô-mura (leg. D. NIKAI, no. 2372, Sept. 16. 1920); Prov. *Tosa*: in oppido Kamo-mura (leg. T. MAKINO), in oppido Ogawa-mura (leg. T. TUYAMA, Jul. 31. 1934); Prov. *Tikuzen*: in oppido Madamura (leg. Y. NABESIMA, no. 9, Sept. 10. 1928); Prov. *Hyûga*: in monte Hyûganisitake (leg. ? no. 7, Aug. 5. 1882).

Distr. Japonia.

牧野根本兩氏共著日本植物總覽ニ和文記載ヲツケテ **Fimbristylis diphylloides** MAKINO トシテ發表サレタノミナノデ茲ニ羅丁文記載ヲ附スル。莖ハ5稜形デ葉ト別ニ生ジ約 30 cm. ニ達シ細ク直立スル。灰黑色ノ小穂ヲ 5-15 個粗ニ生ズル。雄蕊 1 及自 2 個、柱頭ハ 2 岐稀ニ 3 岐スル。果實ハ扁壓サレタル倒卵形體デ表面ニ網狀ノ紋ガアル。

Studies on “Tengu-no-mugimeshi”,⁽¹⁾

a mass vegetation of micro-organisms indigenous to some volcanic regions in the middle part of Japan proper

by

MOTOO TAKAHASHI

高橋基生: 「天狗ノ麥飯」ノ研究 (其一)

I. Occurrence and appellation of the vegetation

“Tengu-no-mugimeshi” which is called also “Iizuna” (飯砂-eatable sand), “Iitsubu” (飯粒-eatable grains) or “Miso-tsuchi” (味噌土),⁽²⁾ is known from old times as a wonderful mass vegetation of micro-organisms growing in some volcanic mountains in the province of Shinano (信濃). The names of some

(1) “Tengu-no-mugimeshi” means the barley-bread of a demon.

(2) “Miso-tsuchi” means the soil like “Miso,” which is a sort of bean paste needed for Japanese soup consomme.